

## II. Claims

**1. (Currently Amended)** Method for the detection of substances in vital skin tissue in which

- light of a predetermined wavelength is directed onto the skin tissue in such a manner that the light penetrates into the skin tissue;

- at least some of the light escaping from the skin tissue is captured and the reflected light is analyzed with an association being made between its wavelength and intensity; and

- the thus determined properties of the reflected light are compared with at least one reference system, the presence and/or concentration of a substance being deduced on the basis of a correlation with the reference system, wherein the at least one reference system enables the detection of psychoactive substances.

**2. (Currently Amended)** Method according to claim 1, characterized in that the at least one reference system makes available reference values, each of which is significant for a certain psychoactive substance or group of psychoactive substances, the intensity distribution of the reflected light over its wavelength being compared with said reference values.

**3. (Currently Amended)** Method according to claim 1, characterized in that a multiplicity of reference spectra is provided, and in that the presence and/or concentration of a psychoactive substance or group of psychoactive substances is deduced depending on the fulfillment of predetermined relationships between the two or more reference spectra and the measured intensity distribution.

**4. (Currently Amended)** Method according to claim 2, characterized in that the concentration of a detected psychoactive substance is deduced on the basis of the intensity of selected wavelength regions.

**5. (Original)** Method according to claim 1, characterized in that the excitation spectrum is in the range from 200 to 800nm.

**6. (Original)** Method according to claim 1, characterized in that the frequency of the excitation light used for excitation is outside of the measured reflectance spectrum.

**7. (Original)** Method according to claim 1, characterized in that the comparison of the measured wavelengths/intensity distribution is performed on the basis of a correlation consideration.

**8. (Currently Amended)** Device for the detection of substances in vital skin tissue, with a light source for producing light of a defined wavelength and for radiating the light onto the vital skin tissue in such a manner that the light penetrates into the tissue; with a light-capturing means for capturing at least some of the light reflected from the tissue; with a light-intensity-measuring means for measuring the intensity of the reflected light with an association being made with the wavelength; and with a correlation-determining means for determining correlation features of the calculated intensity distribution of the reflectance spectrum with at least one reference system, the presence and/or concentration of a substance being deduced on the basis of the determined correlation features, wherein said at least one reference system is configured to enable the detection of psychoactive substances.

**9. (Original)** Device according to claim 8, characterized in that an optical fibre means is provided, for directing the light emitted by the light source onto the tissue.

**10. (Original)** Device according to claim 9, characterized in that an optical fibre means is provided, for capturing the reflected light.

**11. (Original)** Device according to claim 10, characterized in that a spectral dispersion means is provided, for splitting the reflected light into its spectral components.

**12.(Original)** Device according to claim 11, characterized in that a CCD recording means is provided, for determining the intensity of the individual spectral components.

**13. (Original)** Device according to claim 8, characterized in that a means is provided, for capturing the light from a predetermined measuring depth.

**14.(Original)** Device according to claim 13, characterized in that a plurality of reflectance spectra are captured for different, defined measuring depths.

**15. (Original)** Device according to claim 8, characterized in that a storage means is provided, and in a reference system in the form of a reference data record is stored in said storage means.

**16. (Original)** Device according to claim 1, characterized in that the reference data record contains characteristic data with regard to the substance-specific spectra.

**17. (Original)** Device according to claim 8, characterized in that the correlation-determining means makes available a plurality of correlation criteria for the analysis of the spectra.